

Country Name	<b>Project for the Improvement of Water Supply, Sewage and Solid Waste Management in Chitungwiza</b>
Republic of Zimbabwe	

**I. Project Outline**

Background	Since Chitungwiza City in the Harare metropolitan area is located in upstream of Harare and neighboring basins, sanitation of the city considerably affects the neighboring areas. When the outbreak of cholera occurred in Zimbabwe in 2008, it was considered that Chitungwiza had been a source of infection. In fact, Chitungwiza faced the following problems on sanitation, such as limited safe water supply, deteriorating water quality caused by untreated waste water flows into rivers, and unmanaged open dumping of solid waste. Under those situations, improvement of sanitation of Chitungwiza was a critical issue not only for the city but also for the entire Harare metropolitan area.										
Objectives of the Project	Through compiling a report for a proposed master plan on water supply, sewage and waste management in Chitungwiza and preparing a feasibility study report on prioritized project for sanitation in the city, the project aimed at implementation of the proposed projects, thereby contributing to improvement of water supply, sewage and solid waste management in the city.										
	<ol style="list-style-type: none"> <li>Expected Goals through the proposed plan<sup>1</sup>: Water supply, sewage and solid waste management is improved in Chitungwiza City</li> <li>Expected utilization of the proposed plan by the project: The projects for water supply, sewage and solid waste management in Chitungwiza City, including the projects supported by other donors, are implemented based on the reports on the Master Plan and the Feasibility Studies prepared by the project.</li> </ol>										
Activities of the Project	<ol style="list-style-type: none"> <li>Project site: Chitungwiza City (Harare Province)</li> <li>Main activities: 1) Collection of basic information on sanitation, 2) Preparation of master plans on water supply, sewage and solid waste management</li> <li>Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Zimbabwean Side</td> </tr> <tr> <td>1) Mission members: 7 persons</td> <td>1) Staff allocated: N.A.</td> </tr> <tr> <td>2) Training in Japan: 5 persons</td> <td>2) Land and facility: Office space</td> </tr> <tr> <td>3) Equipment: Hand pumps, water flow meter, etc</td> <td>3) Operation cost</td> </tr> </table> </li> </ol>			Japanese Side	Zimbabwean Side	1) Mission members: 7 persons	1) Staff allocated: N.A.	2) Training in Japan: 5 persons	2) Land and facility: Office space	3) Equipment: Hand pumps, water flow meter, etc	3) Operation cost
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Project Period	March, 2012 to September, 2013	Project Cost	(ex-ante) 340 million yen (actual) 216 million yen								
Implementing Agency	Chitungwiza Municipality										
Cooperation Agency in Japan	NJS Consultants Co., Ltd.										

**II. Result of the Evaluation**

1 Relevance
<p>&lt;Consistency with the Development Policy of Zimbabwe at the Time of Ex-Ante Evaluation and Project Completion&gt;</p> <p>The project was consistent with Zimbabwe's development policy of the "State Reconstruction Programme" (2011-2015) prioritizing promotion of water supply and improvement of sanitation and "the National Solid Waste Management Strategy" (2010) to improve waste management at the time of ex-ante evaluation and the time of project completion.</p> <p>&lt;Consistency with the Development Needs of Zimbabwe at the Time of Ex-Ante Evaluation and Project Completion &gt;</p> <p>The project was consistent with the Zimbabwe's development needs to improve sanitation in the Harare metropolitan area including Chitungwiza since sanitation had been deteriorating by limited safe water supply, unfunctional and malfunctioning sewage treatment and untreated solid waste under the rapid population growth and economic development.</p> <p>&lt;Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation&gt;</p> <p>The project was consistent with a Japan's ODA policy for Zimbabwe supporting one of the four priority areas of environment protection including water at the time of ex-ante evaluation<sup>2</sup>.</p> <p>&lt;Appropriateness of Project Design/Approach&gt;</p> <p>The approach of this project was appropriate to propose the master plan for water supply, sewage and solid waste management in order to meet the development needs in the target area of Chitungwiza City where the public services had been deteriorating as mentioned above. Although the scope of the project was changed to cancel feasibility studies on the proposed project in the master plan due to the serious fiscal difficulties of Chitungwiza City, it was a right decision considering financial capacity of Chitungwiza City for project implementation. On the other hand, the fiscal problem of the Chitungwiza City was not predictable at the stage of project formulation and preparation since the fiscal revenue of the national government largely increased by the commendable improvements in tax policy and administration after the fiscal revenue bottomed in 2008<sup>3</sup></p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the relevance of the project is high.</p>

<sup>1</sup> The degree of achievement of expected goals is not to be assessed in principle at the time of ex-post evaluation, since it is defined as the medium-to-long-term goals which will be attained as a result of crystallizing the proposed plan ("output" of the project).

<sup>2</sup> Ministry of Foreign Affairs, "ODA Databook 2011"

<sup>3</sup> International Monetary Fund, "IMF Country Report No. 11/135 Zimbabwe: 2011 Article IV Consultation", (2011)

## 2 Effectiveness/Impact

### <Status of Achievement for the Objectives at the Time of Project Completion>

The objectives of the project were partially achieved by the project completion. As planned, the final report on master plans for water supply, sewage and solid waste management was completed. However, a report on feasibility studies on the proposed projects in the master plans was not prepared because no feasibility study was conducted by the project under the serious fiscal predicament of Chitungwiza City.

### <Utilization Status of the Proposed Plan at the Time of Ex-post Evaluation>

The master plans prepared by the project have been partially utilized since there has been a difficult situation to implement projects in Chitungwiza City because of the serious fiscal constraints. Under such situation, the African Water Facility (AWF)<sup>4</sup> and ZimFund<sup>5</sup> have committed to projects for water supply. Chitungwiza City has a plan to build a Muda dam for own water supply with Chinese Assistance (60 million USD). The Urgent Water Supply and Sanitation Rehabilitation Project Phase I and Phase II funded by ZimFund improved water production through refurbishment of treatment plants<sup>6</sup>. For the rehabilitation of the water treatment plant, the municipal government of Chitungwiza adopted some recommendations such as revision of tariff proposed by the master plan prepared by the project.

### <Status of Achievement for Expected Goals through the Proposed Plan at the Time of Ex-post Evaluation>

The expected goals were not achieved at the time of ex-post evaluation. For the water supply coverage, the ratio improved to 75.5% in 2017 from 31% in 2015 when the public utility services had not been functioning under the extraordinary hyperinflation and the fiscal predicament. It was because of more water supply from the Harare Water Department resulted from the negotiations with the Harare Water Department. For waste water treatment, the ratio has sustained for the last three years after the drop in 2015. The implementation of projects to upgrade sewer reticulation at Zengeza and Seke by Zimfund and Chitungwiza Municipality has been under preparation. For the solid waste collection, after the sharp drop in the ratio from 86.5% in 2014 to 58.75% in 2015, it improved to 71.5% in 2016 and 2017. However, as mentioned above, any changes in the indicators for water supply, sewage treatment and solid waste management cannot attribute to the project because the proposed projects have not been implemented due to the serious fiscal constraints.

### <Other Impact at the time of Ex-post Evaluation>

No positive or negative impact was confirmed at the time of project completion.

### <Evaluation Result>

In light of the above, the effectiveness/impact of the project is fair.

#### Status of Achievement of Utilization Status of the Proposed Plan and Expected Goals through the Proposed Plan

Aim	Indicators	Results																				
(Utilization Status of the Proposed Plan) The projects for water supply, sewage and solid waste management in Chitungwiza City, including the projects supported by other donors, is implemented based on the reports on the Master Plan and the Feasibility Studies prepared by the project.	Commitments of donors' supports based on the Master Plans and the Feasibility Studies by the project - The number of projects committed by donors - The amounts committed by donors (Proposed projects to be implemented by 2020) - Water supply: 3 projects - Sewage treatment: 1 project - Solid waste management: 6 projects	Status of achievement: Partially achieved. (Ex-post Evaluation) • 3 projects have been committed by the donors of the African Water Facility and ZimFund. • Approximately 7 million USD have been financed by the donors for the abovementioned 3 projects.																				
(Expected Goals through the Proposed Plan) (Not to be evaluation) Water supply, sewage and solid waste management is improved in Chitungwiza City.	1. Improvement of coverage of water supply system in Chitungwiza City 2. Improvement of sewage treatment ratio in Chitungwiza City 3. Improvement of solid waste collection rate in Chitungwiza City	Status of achievement: Not achieved. (Ex-post Evaluation) <table border="1"> <thead> <tr> <th></th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> </thead> <tbody> <tr> <td>Water supply coverage ratio</td> <td>99.3%</td> <td>31%</td> <td>47%</td> <td>75.5%</td> </tr> <tr> <td>Waste water treatment ratio</td> <td>96.5%</td> <td>69.47%</td> <td>69.9%</td> <td>69.6%</td> </tr> <tr> <td>Solid waste collection ratio</td> <td>86.5%</td> <td>58.75%</td> <td>71.5%</td> <td>71.5%</td> </tr> </tbody> </table>		2014	2015	2016	2017	Water supply coverage ratio	99.3%	31%	47%	75.5%	Waste water treatment ratio	96.5%	69.47%	69.9%	69.6%	Solid waste collection ratio	86.5%	58.75%	71.5%	71.5%
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(Source) Information collected by the questionnaire surveys for Chitungwiza City

## 3 Efficiency

The project cost and project period were within the plan (ratio against the plan: 64%, 79%) but one of the outputs for preparing a report on feasibility studies on the proposed projects had been canceled and the dispatch of the Japanese experts had been reduced. Therefore, the efficiency of the project is fair.

## 4 Sustainability

### <Policy Aspect>

In the "Zimbabwe National Water Policy" (2012), water is one of core issues for the country in order to promote agricultural and industrial development as well as urban and rural development. In addition, treated wastewater is considered as an important additional source of water in the strategy.

<sup>4</sup> AWF is a multilateral fund, which is funded by the African Ministers' Council on Water (AMCOW) and administered by the African Development Bank (AfDB), in order to provide grants and technical cooperation to catalyze development of the water sector in Africa.

<sup>5</sup> The Zimbabwe Multi-Donor Trust Fund contributed by seven donors of Australia, Denmark, Germany, Norway, Sweden, Switzerland and United Kingdom and managed by AfDB.

<sup>6</sup> Since Chitungwiza does not have own water treatment plant, it relies on Prince Edward Water Treatment Plant in Harare which was rehabilitated by the project funded by ZimFund.

<Institutional Aspect>

13 staff members of the municipal government of Chitungwiza who had trained by the project have been still working for the same positions. According to the interview with the municipal government of Chitungwiza, the organizational structure for implementing the proposed projects in the master plans prepared by the project is appropriated with the necessary staff required for project implementation. The Chitungwiza Municipality plans to recruit more staff once the BNR (biological nutrient removal) system for sewage treatment increases.

<Technical Aspect>

The technical skill of the Chitungwiza Municipality is sufficient level to implement of projects for the area of sewage treatment proposed in the Master Plan. The current staff properly manage several waste water treatment plants with the BNR system. For other areas of water supply and solid waste management, there is no information available.

<Financial Aspect>

As mentioned above, the municipal government of Chitungwiza faced the fiscal problems reducing financial viability of the proposed projects during the implementation of this technical cooperation project. After the project completion, the fiscal predicament of the municipal government went further into more serious situation. After hyperinflation up to the time of ex-post evaluation, most public organization and private sectors could not purchase imported items quickly. Even Chitungwiza City tried to manage to purchase parts regarding with the plant from South Africa but the Reserve Bank of Zimbabwe (Central Bank of Zimbabwe) prioritizes transactions by categories going outside countries because of shortage of foreign currency reserves. For mitigating the fiscal problems, there have been discussions about introduction of public-private partnership (PPP) for operation of public utility facilities, such as water supply system and sewage treatment plants. However, prospects for the fiscal balance of the municipal government is still unclear.

<Evaluation Result>

In light of the above, serious problems have been observed in terms of the financial aspect of the implementing agencies. Therefore, the sustainability of the effectiveness through the project is low.

5 Summary of the Evaluation

The project partially achieved the objectives to prepare the report on the master plans for water supply, sewage and solid waste management with the proposed projects. As for sustainability, the fiscal predicament of the municipality government of Chitungwiza constrained the implementation of the proposed projects by the master plan and the future prospect of fiscal balance is still unclear. As for efficiency, the project period slightly exceeded the plan. Considering all of the above points, this project is evaluated to be low.

**III. Recommendations & Lessons Learned**

Lessons Learned for JICA:

- The financial capacity of the implementing agency is one of key issues to ensure effectiveness and sustainability of technical cooperation project supporting for formulation of master plans in infrastructure development. In many cases in developing countries, implementing agencies, in particular, local governments, face fiscal constraints on public utility services, including investment in facilities. Therefore, it is essential to consider viable funding sources, including other donors' funds, in master plans to be proposed by the technical cooperation project. In addition, although it is not easy to predict fiscal conditions of local government in long run, it is critical to carefully analyze fiscal conditions of implementing agency before starting the project as well as during the project implementation in order to come up with effective countermeasures against possible fiscal constraints in the master plans to be proposed.
- Most of local governments depend on their budget source allocated by central ministries and do not have own budget sources so much. This budget structure causes difficulties for the local governments to afford even minimum maintenance cost for public infrastructure. Development partners should consider affordability of maintenance cost for infrastructures, including facility and equipment, which are procured by the development partners, for long run. Therefore, at the planning stage for the technical cooperation project for master planning or during the implementation period, JICA needs to coordinate central ministries which have power and finance in order to involve in the process of master planning at local government level as responsible partners of local governments. In addition, at the implementation stage, it is preferable to discuss with stakeholders, including related ministries, development partners and the private sectors, about possible funding sources for implementation of the master plan to be proposed from aspects of short-term and the mid to long-term period.



Grid Chamber, Zengeza Sewage Treatment Plant



New Water Pipe at Chitungwiza